



# Montana DNRC Forestry Division

## FIRE AND AVIATION MANAGEMENT

Aviation

Equipment Development  
and Support

Fire Preparedness

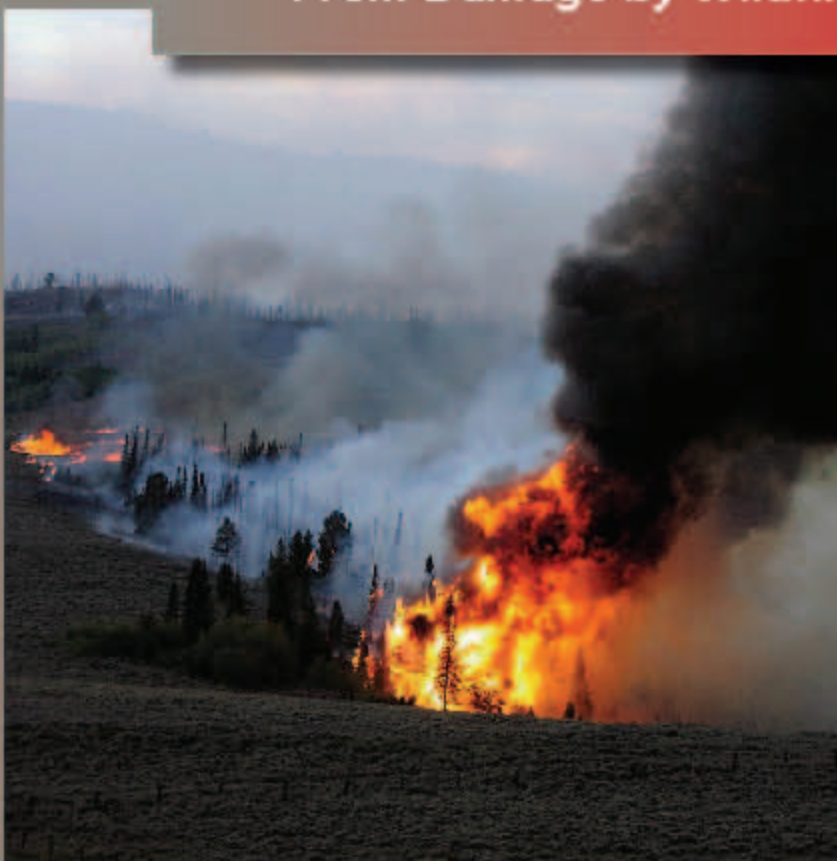
Fire Prevention

Fire Suppression

Training

# Fire Suppression

*Protecting Lives, Property,  
and Natural Resources  
From Damage by Wildfire*



**Montana Department of Natural Resources and Conservation  
Forestry Division  
Fire and Aviation Management Bureau  
Fire Suppression**

**T**he DNRC is charged by state statute with providing wildland fire protection for state and private lands in Montana. DNRC provides protection to 5.2 million acres through its direct protection program, protects an additional 45 million acres through the State/County Cooperative Fire Program, and has signed an interagency agreement for cooperative wildfire management with five federal agencies that have wildfire management responsibilities in Montana.

**D**NRC's firefighting resources include its permanent staff, about 120 seasonal firefighters, more than 50 wildland fire engines, 6 helicopters, and 3 fixed-wing aircraft. These resources have been deployed to fight an average of 426 fires each year. The direct protection program provides initial attack on an average of 400 fires per year, in addition to providing county assists when fires have escaped initial attack by county firefighters. DNRC's goal is to contain 95% of all direct protection fires at 10 acres or less, and has exceeded this goal for the past 20 years, containing an average of 96% of all direct protection fires at 10 acres or less.



**Accomplishments  
2003 and 2004 Fire Seasons**

	2003	2004
Direct protection fires	516	307
Percent direct protection fires controlled at 10 acres or less	97%	98%
County fires	68	25
Support fires	256	178

**Goal**

Safely, economically, and efficiently protect life and property from damage by wildfire. Control 95% of direct protection fires at 10 acres or less.

**Rapid Initial Attack Helps  
Protect Lives, Property, and  
Resources, and Saves Money  
for Montana Taxpayers**

**D**NRC's key wildfire suppression strategy is to detect and suppress wildfires while they are small, before they become the large catastrophic fires that can threaten lives, destroy property and natural resources, and cost millions of dollars to suppress.

**R**apid initial attack is made possible through the use of lookouts and DNRC's fixed-wing aircraft for fire detection patrol flights, and by immediate response with the appropriate firefighting resources when wildfires are detected. Safety is the top priority in DNRC's wildfire management program; suppressing wildfires while they are small and easier to control greatly reduces risks to firefighters and the public.

**T**he cost of fighting wildfires increases dramatically with the size of the fire. Fires less than 10 acres in size cost an average of \$3,500 per fire to suppress; fires between 100 and 300 acres average nearly \$220,000 in suppression costs per fire; and fires over 5,000 acres average over \$4.1 million dollars to suppress. The increasing frequency of severe wildfire seasons makes DNRC's effective and efficient rapid initial attack strategy more important with every passing year.

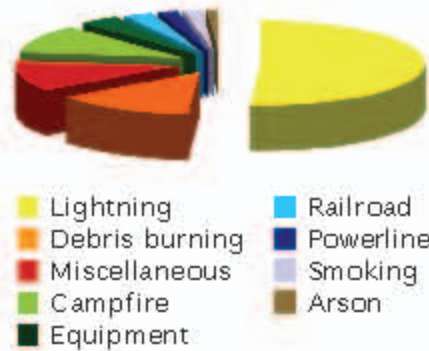


# Wildfires and DNRC's Suppression Strategy

## Wildfire Causes

Forty-nine percent of the wildfires in Montana in 2004 were caused by lightning strikes. The remaining fires were caused by human activity. The 10-year average for human-caused fires is 52% (1,987 out of 3,826 fires). Improving prevention is an important component of DNRC's overall wildfire management strategy.

Causes of Direct Protection and County Fires  
1995 - 2004



## DNRC's Wildfire Suppression Strategy

DNRC's wildfire suppression strategy is to try keep small wildfires from becoming large wildfires through rapid initial attack. The agency's goal is to suppress 95% of all direct protection fires at 10 acres or less. DNRC's firefighters have been successful in meeting this goal, and managed to suppress 97% of all wildfires at 10 acres or less during the severe wildfire season of 2003.

Successful initial attack does more than just suppress fires; it also minimizes risk to firefighters, lives, property, and natural resources, and minimizes the cost of fire suppression. Most of Montana's fire suppression costs are tied to the small percent of fires that exceed 10 acres.

## Wildfire Trends

Montana has experienced some of its worst wildfire seasons during the past several years. A number of factors have contributed to the increased frequency of severe wildfire seasons, most importantly prolonged drought and unhealthy forests with fuel levels far exceeding historical averages. At the same time, increasing development in the wildland-urban interface has placed more people, structures, and businesses at risk, and raised the likelihood that more Montana communities will face the tremendous social, economic, and ecological costs of catastrophic wildfires.

Many federal, state, and local agencies and organizations are working hard to reduce the vulnerability of communities to wildfire through measures such as hazardous fuels treatments and creation of defensible space around structures, but the magnitude of the problem, in terms of numbers of communities at risk and acres of unhealthy forests, far exceeds current efforts and resources. Fire suppression, especially rapid initial attack that contains small fires before they can spread, will remain essential to protecting lives, property, and resources.

Year	Total Fires in Montana (all fire protection agencies)	Large Fires (over 200 acres)	Total Acres Burned (all fire protection agencies)	DNRC Direct Protection and County Fires	DNRC Acres Burned
2000	2,802	101	1,160,145	541	167,584
2001	1,463	31	146,819	334	16,758
2002	1,372	41	110,309	322	28,394
2003	2,326	91	736,809	584	176,038
2004	1,447	15	18,445	332	10,807



## The Direct Protection Program

**D**NRC's direct protection program is responsible for protection of 5.2 million acres of land in western Montana. DNRC firefighters also provide assistance upon request to cooperating counties when wildfires exceed a county's capabilities, and provide support upon request to other firefighting agencies to help suppress large wildfires.

**DNRC has contained 95% of all direct protection fires at 10 acres or less for the last 20 years.**

**M**ontana law establishes the responsibility of owners of classified forestland to provide wildland fire protection for their property, and provides the opportunity to contract with DNRC for that service. The direct protection program provides protection to classified forestlands in Forest Fire Districts and

to landowners in Agreement Areas. Landowners in Forest Fire Districts pay an annual fee for fire protection. The fee is set by statute to raise no more than one-third of the appropriated budget for DNRC's firefighting program.

**F**orestland owners in Agreement Areas sign an agreement with DNRC stating their inability to

protect their land from fire and their willingness to pay DNRC an annual fee for fire protection. Forestland owners in Agreement Areas receive the same level of protection as forestland owners in Forest Fire Districts.

**T**he top priorities of the direct protection program are rapid initial attack and control of large fires that have



escaped initial attack, with the goal of protecting lives, property, and resources. When fire conditions are extreme, DNRC may make use of "severity" resources, firefighters and equipment that are pre-positioned in areas of high fire danger to supplement its own initial attack resources. Whenever possible, DNRC uses its own resources to help contain wildfire suppression costs.

**T**he direct protection program is staffed by about 150 permanent and seasonal firefighters and fire management personnel. Aviation resources play a key role in DNRC's wildfire suppression strategy. Fixed-wing aircraft make daily wildfire detection patrols during the fire season, and helicopters are used to transport water and ground crews during rapid initial attack.

### DNRC's Direct Protection Program Resources



- 120 Firefighters
- 10 Lookouts
- 50 Frontline engines
- 6 Water tenders
- 5 Helitenders
- 6 Helicopters
- 3 Fixed-wing aircraft
- 4 Radio caches





## The State/County Cooperative Fire Program

The State/County Cooperative Fire Program protects all state and private land that is not protected under the direct protection program, about 45 million acres statewide. Every county in Montana participates in this program. Each county has signed an agreement with DNRC which specifies that the county will fight wildland fire on all state and private lands not covered by an existing fire agency. The counties provide fire protection through volunteers, county government personnel, and rural fire departments and districts. Landowners do not pay a fee for this type of protection.

In return, DNRC provides wildland fire training and equipment to county firefighters, and provides organizational and financial assistance for fires that escape initial attack and that are beyond a county's ability to control. The State/County Cooperative Fire Program is a cost-saving and effective arrangement for providing all state and private land in Montana with some form of protection against the spread of wildland fire. Firefighters in the State/County Co-op Program fight an estimated 4,500 fires each year, and request assistance from DNRC on an average of 35 fires.



*Through the State/County Cooperative Fire Program, counties agree to fight wildfires on state and private lands not protected by an existing fire agency....*



*...and in return, receive training, equipment, and assistance in fighting large fires that escape initial attack.*

## Containing the Costs of Wildfire Suppression

The increasing incidence of severe wildfire seasons has resulted in increasing costs for fire suppression. Montana's wildfire suppression costs totaled \$54 million in 2000 and \$72 million in 2003. DNRC receives \$7.4 million annually for its Fire and Aviation Management Program, which covers only preparedness, not actual fire suppression. Of the \$7.4 million, approximately one-third is generated by assessments on forestland owners who are receiving direct fire protection, 10% is federal funding, and the remainder is provided by the state general fund. Wildfire suppression costs are paid by the state general fund, usually through a supplemental appropriation.



*DNRC's wildfire prevention efforts help reduce the number of human-caused wildfires, such as debris fires that escape control.*

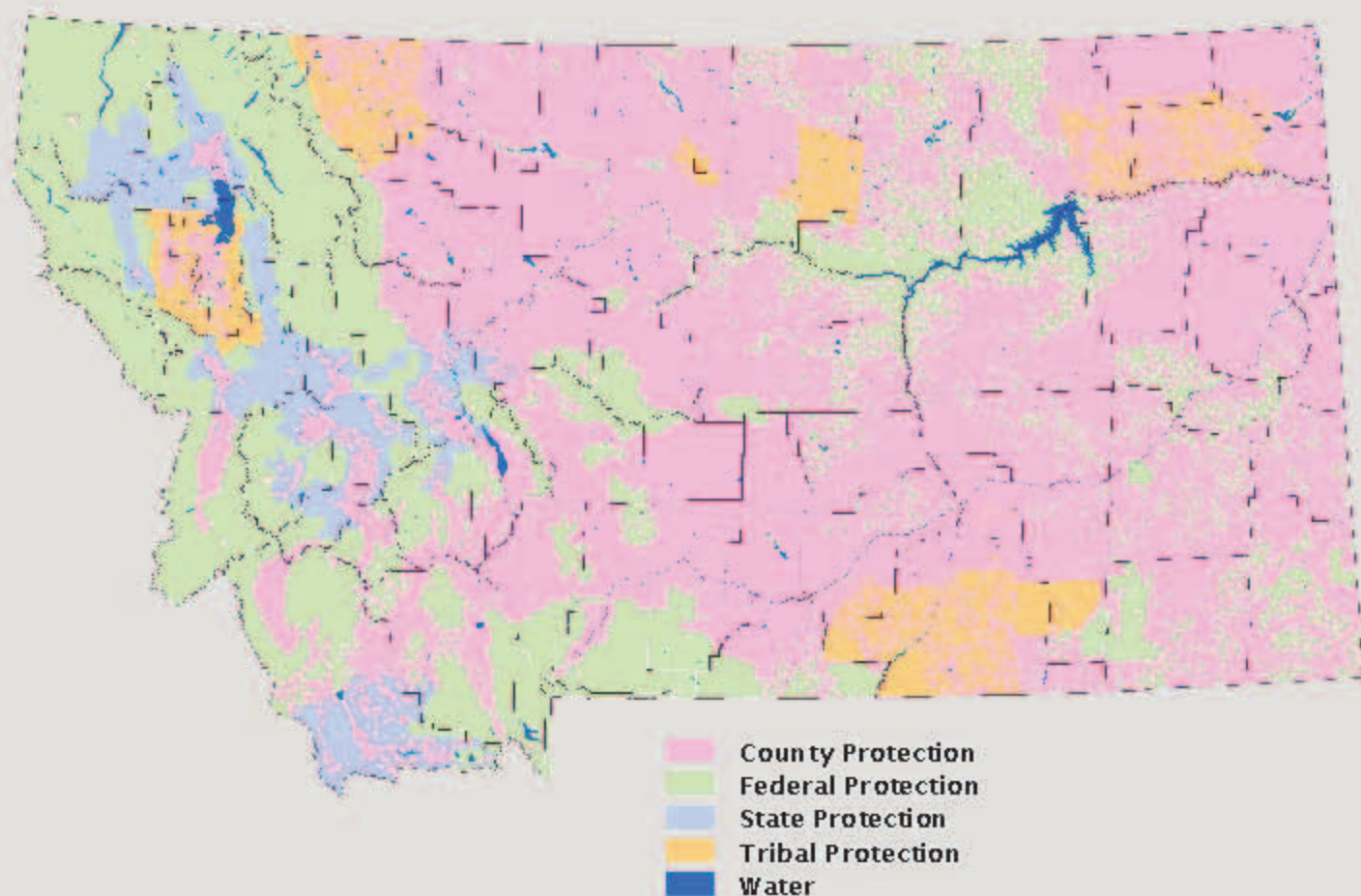


*Large fires that escape initial attack account for most of Montana's wildfire suppression costs.*

DNRC employs a number of strategies to help contain the costs of wildfire suppression. Recognizing that the least expensive fire is one that never starts, the agency devotes major efforts to fire prevention. When fires start, costs increase dramatically with the size of the fire, thus DNRC's focus on rapid initial attack to suppress fires while they are small. Whenever possible, DNRC relies on its own firefighting personnel and resources to help control costs. DNRC has also saved taxpayers millions of dollars by developing wildland fire engines and 4 helicopters from surplus equipment loaned through the Federal Excess Property Program.



## Wildland Fire Protection in Montana



**W**ildland fire management in Montana is accomplished through cooperative efforts between the state, federal agencies, and county governments. DNRC has entered into a cooperative fire management agreement with 5 federal agencies, which include the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and USDA Forest Service. The agreement recognizes that while DNRC is responsible for wildland fire protection on state and private lands and the federal agencies are responsible for protection on federal lands, it is mutually beneficial for all the agencies to coordinate efforts for fire prevention, detection, and suppression, given that lands protected by different agencies are intermingled throughout the state.

**T**he interagency agreement spells out agency responsibilities, specifies mechanisms for cooperation among the firefighting agencies, and recognizes DNRC as the entity that will coordinate with county and local firefighters. An important concept identified in the agreement is use of the closest available resources for initial and extended attack, regardless of which agency they belong to and regardless of which agency has protection responsibilities. Local firefighters can respond quickly, and are familiar with an area, its resources, and expected fire behavior. Coordination among the agencies helps limit duplication of efforts and improves the efficiency and effectiveness of wildfire management in Montana.

Top cover photo of the Robert Fire by Karen Nichols, *Daily Inter Lake*, Kalispell, MT.

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